hyperpolarization-activated cation channels are hyperpolarized (i.e. the hyperpolarization-activated cation channel is activated) and this hyperpolarization of the cells, which is reversed under physiological conditions by the activity of the hyperpolarization-activated cation channel, is maintained. By exclusion of extracellular sodium ions, the activated channel is unable to transport sodium ions into the cells, i.e. to depolarize the cells. If, simultaneously or even prior to the addition of the sodium ions, substances are added that modulate the activity of the hyperpolarization-activated cation channel, the depolarization is affected. For example, compared to when only sodium ions are added, depolarization is increased in the case of HCN activators (for example forskolin) and reduced in the case of HCN inhibitors (for example zatebradine = 3-[3-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]propyl]-1,3,4,5-tetrahydro-7,8-dimethoxy-2H-3-benzazepin-2-one; Reiffen et al. (1990)).--

Page 11, replace the paragraph bridging lines 4-11 with the following new paragraph:

-- The cells can, but do not necessarily, contain nucleic acids (i.e., RNA, DNA, PNA) that code for the hyperpolarization-activated cation channel. In embodiments, the cells contain DNA. In embodiments, the cells contain RNA. In embodiments, the cells contain a cDNA of a hyperpolarization-activated cation channel in a suitable plasmid. Such cells can be prepared by transfecting the original cell line with a plasmid that contains the cDNA of a hyperpolarization-activated cation channel. Other techniques can be used as well. Techniques for introducing heterologous nucleic acids into cells are well known and widely practiced by those of skill in the art, and thus need not be detailed here.--

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Page 15, replace the paragraph bridging lines 12-20 with the following new paragraph:

-- In the FLIPR, Na^+ is added to the cells, so that the activated HCN (after a few seconds, in which there are mixing effects) causes, from about 15 seconds after the addition of Na^+, depolarization of the cells, which becomes visible by an increase in fluorescence. The detection of HCN modulators can rely on a difference between cells having an activated HCN channel (e.g., only Na^+ addition) and cells having a blocked HCN channel (e.g., Na^+ + 8 mM CsCl). It has been determined that a greater difference provides a greater reliability in the system. For example, activation of the HCN channel by pre-incubation with 10 μM forskolin increases the difference between the uninhibited 100% value from the inhibited 0% value considerably.--

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Page 21, replace the paragraph bridging lines 7-15 with the following new paragraph:

-- In the FLIPR, Na^+ is added to the cells so that the activated HCN (after a few seconds, in which there are mixing effects) causes, from about 15 seconds after the addition of Na^+, depolarization of the cells, which becomes visible by an increase in fluorescence. An activation of the HCN channel by preincubation with 10 μM forskolin increases the difference between the uninhibited 100% value from the inhibited 0% value considerably. By comparison with the control values, it can be detected whether a substance to be tested is an activator (more rapid or more pronounced depolarization) or an inhibitor (slower or inhibited depolarization).--

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Delete the paragraph bridging page 21, line 17 through page 22, line 8.

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